March 11, 2005

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: *Progeny LMS, LLC Petition for Rulemaking to Amend Part 90 of the Commission's Rules Governing Location and Monitoring Service To Provide Greater Flexibility, RM-10403*.

ExParte Presentation

Dear Ms. Dortch:

Progeny LMS, LLC ("Progeny") hereby seeks to refresh the record in the above-captioned proceeding. Progeny filed a Petition for Rulemaking three years ago seeking additional flexibility for the Commission's Multilateration Location and Monitoring Service (M-LMS) rules in the 902-928 MHz band.[1] While awaiting Commission action, Progeny filed a Request for Waiver last month for a limited extension of the construction requirements for its licenses, citing circumstances beyond its control such as a lack of suitable equipment.[2] The waiver request represents an ongoing effort by Progeny to put these licenses to productive use, amid continued exploration of opportunities with equipment-makers and service providers.

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[1] See *Petition for Rulemaking in the Matter of Progeny LMS, LLC, Amendment of Part 90 of the Commission's Rules Governing the Location and Monitoring Service to Provide Greater Flexibility,* RM-10403 (filed March 5, 2002) (*Progeny Petition*). Progeny also submitted a White Paper to demonstrate that the changes may be carried out in a way that will minimize potential interference to Part 15 devices.

[2] See *Request for Waiver* filed by Progeny concerning a limited extension of the five-year construction requirement for its M-LMS licenses, filed February 15, 2005.

But to maximize the public interest benefits of this spectrum, Progeny continues to believe that a rulemaking proceeding is needed to apply to M-LMS the kinds of flexible use and interference mitigation techniques that have fostered competitive applications for other services, including those at 900 MHz. Progeny has demonstrated that with additional regulatory flexibility, LMS operations would not pose a greater interference risk than Part 15 devices themselves do in this band.

Need for Relief Increasingly Relevant

Recent flexibility advances for nearby spectrum, or in some cases in the very band in which Progeny operates, argue even more strongly for Progeny's original petition. Moreover, these neighboring and in-band licensees often are granted relief for the same reasons that are the basis of Progeny's request. Thus, the FCC should open a rulemaking proceeding to provide flexibility for these licensees, enabling them to adapt to technological advances and marketplace demands.

The FCC's public policy objectives in driving spectrum flexibility apply with equal force to M-LMS operations, including:

- Facilitating the deployment of services by eliminating unnecessary regulatory restrictions, allowing spectrum utilization to respond to market demands.

- Ensuring that spectrum is put to its most beneficial use by allowing the maximum feasible flexibility. For example, Section 303(y) of the FCC's rules, enacted subsequent to the adoption of LMS service rules, allows flexible spectrum use if it is:

  (1) Consistent with international agreements; and

  (2) The FCC finds, after notice and an opportunity for comment, that it would be in the public interest; would not deter investment in communications services and systems or technology development; and would not cause harmful interference.

Progeny demonstrated in its petition for rulemaking that its proposed rule changes for M-LMS are in line with each of these criteria.

Rulemakings Contain Presumption for Flexibility

The Commission's focus on allowing spectrum deployments to respond to market-based requirements while protecting against harmful interference has resulted in additional regulatory flexibility – either finalized or proposed – in numerous bands, including unlicensed operations at 902-928 MHz and 2.4 and 5 GHz; private wireless operations at 900 MHz; as well as 800 MHz; MDS/ITFS spectrum; Advanced Wireless Services.

The Commission is considering or has already granted regulatory flexibility for both licensed and unlicensed operations elsewhere in the 900 MHz band in which Progeny is licensed. Typically these rule changes or proposals contain a *presumption for* flexibility. For example, the 900 MHz proposed rulemaking outlined below contains a tentative conclusion for flexible use of the remaining white space among these licensees.[3] To the extent commenters believe flexibility is not appropriate in this band, they are asked to provide suggestions on possible use and "appropriate analysis." New regulatory requirements developed by the FCC and revisions of existing rules also increasingly are based on technical requirements, rather than service restrictions, as is the case for M-LMS.

Meanwhile, regulatory restrictions, such as Section 90.353(d) have remained intact for M-LMS licenses since the service rules were finalized in 1998. For example, Section 90.353(d) requires LMS licensees to demonstrate in field tests that their equipment does not interfere with any unlicensed service in the band. This means the M-LMS regulatory regime has remained static while the operating environment for unlicensed devices that LMS must accommodate is continually changing.[4]

[3] "White space" is defined in the NPRM as the geographic areas not served by the existing B/ILT licenses.

[4] See *FCC Biennial Regulatory Review, Wireless Telecommunications Bureau Staff Report* in Docket No. 04-180, adopted January 5, 2005. The report said that while the number of LMS licensees has increased since the FCC completed its auction of M-LMS licensees in 1999, there has not been significant deployment of these services. "The services originally envisioned for LMS, such as vehicular tracking, tend to be niche services," the report said. Meanwhile, competing location

This is a particularly perilous dynamic for LMS licensees already stymied by a lack of equipment. Nonetheless, the Commission has continued to cite the pubic interest benefits of viable service offerings in the M-LMS band. For example, in granting a construction extension request to M-LMS licensee Warren C. Havens, the FCC said: "Notwithstanding the availability of telematics, we find that there is an important public interest benefit in ensuring the utilization of M-LMS spectrum and promoting a variety of services to the public."[5]

Relief Elsewhere at 900 MHz

Examples of flexibility under consideration or granted at 900 MHz since Progeny filed its petition for rulemaking include:

Increased Flexibility for Unlicensed: In a July 2004 order, the FCC adopted changes to technical rules for unlicensed devices contained in Parts 2 and 15 of the Commission's rules, including systems at 902-928 MHz. The changes were designed to facilitate the roll out of advanced technologies and to provide greater flexibility to operators in deploying systems, particularly for wireless ISPs serving rural areas.[6] For example, the *Report and Order* allowed smart antenna technology to operate at higher power levels without causing increased interference. The *Part 15 Order* stated this increased flexibility "in our technical rules for unlicensed devices will encourage and facilitate an environment that stimulates investment and innovation in broadband technology and services."

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services have proliferated, including offerings from satellite-based service providers. The report concluded that proposed changes by LMS Wireless raised reallocation and other questions that did not fall under the rubric of a biennial review.

[5] See *In the Matter of Request of Warren C. Havens for Waiver of the Five-Year Construction Requirement for his Multilateration Location and Monitoring Service Economic Area Licenses, Memorandum Opinion and Order,* adopted December 8, 2004.

[6] See *In the Matter of Modification of Parts 2 and 15 of the Commission's Rules for Unlicensed Devices and Equipment Approval, Report and Order*, ET Docket No. 03-201, rel. July 12, 2004 *(Part 15 Order).*

Eliminating B/ILT Restrictions: In February 2005, the Commission approved a Notice of Proposed Rulemaking, which aims to allow more flexible use of "white space" at 900 MHz. The FCC said that the proposed framework will facilitate the provision of services to consumers by eliminating unnecessary regulatory restrictions, and thereby "provide greater flexibility in deploying the spectrum to respond to evolving market demands."[7] Besides teeing up competitive bidding procedures for new licensees in the band, the FCC proposed amendments to Part 90 rules to allow more flexible use of the channels allocated to Business and Industrial Land Transportation (B/ILT) users at 896-901/935-940 MHz.

Among the changes lined up by the proposal was a geographic licensing scheme and a band plan to "provide the flexibility necessary to construct systems responsive to changing market demands." In line with the recommendations of the FCC's Spectrum Policy Task Force (SPTF), the proposal was designed to give new licensees at 900 MHz the flexibility to provide any fixed or mobile service under the allocation for this spectrum, including commercial mobile radio services. The proposal also aimed to build on the flexibility given to Private Land Mobile Radio Service licensees at 900 MHz when the FCC consolidated the B/ILT license categories, which permitted more 900 MHz licenses to be utilized for commercial services. The proposal cited the SPTF recommendations as pointing "to increased flexibility in the use of spectrum as an important means of promoting greater technical, economic and marketplace efficiency."

The proposal turned to Section 303(y), concluding that the proposed technical rules would prevent harmful interference among users.[8] Specifically, the NPRM applied Section 303(y)'s criteria to find that:

> "…[T]he public interest benefits of flexibility are manifold. The Commission has identified the establishment of maximum feasible

[7] See *Notice of Proposed Rulemaking and Memorandum Opinion and Order in the Matter of Amendment of Part 90 of the Commission's Rules to Provide for Flexible Use of the 896-901 MHz and 935-940 MHz Bands Allotted to the Business and Industrial Land Transportation Pool*, WT Docket No. 05-62, February 16, 2005 (*900 MHz NPRM)* at page 3.

[8] Recognizing the benefits of spectrum flexibility, Congress amended the Communications Act to incorporate such criteria in 1999. Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997) (BBA-97); 47 U.S.C. § 303(y).

> flexibility in both spectrum designations and allocations and service rules as a critical means of ensuring that spectrum is put to its most beneficial use. We would expect the economic efficiencies of flexibility to foster, not deter, technology development and investment in communications services and systems."

The proposal tentatively concludes that while allowing flexible use of the remaining 900 MHz white space, the FCC should continue to license these bands under a Part 90 framework, including both new users and incumbents. As a rationale for this conclusion, the proposal cites "the interest of consistency and symmetry within the 900 MHz band." This same interest in symmetry should be applied to M-LMS concerning the "flexible use spectrum management principles" cited by the 900 MHz NPRM.

Reconfiguration of 800 MHz/Flexibility at 900 MHz: The FCC adopted a plan in July 2004 to mitigate ongoing public safety interference issues at 800 MHz.[9] The order recognized that to effectuate the planned reconfiguration of public safety, Specialized Mobile Radio (SMR) and private wireless licensees, Nextel would likely have to shift some operations from 800 MHz to 900 MHz to provide the necessary "green space" for this transition. In some areas, the order anticipated that Nextel would have to share spectrum in the 817-824 MHz/862-869 MHz part of the reconfigured band with other Enhanced SMR licensees. Recognizing that such sharing reduced the amount of 800 MHz spectrum available to Nextel, the order provided regulatory flexibility for Nextel "to make up the shortfall" using 900 MHz band channels. The amended rules allow 900 MHz band licensees to initiate CMRS operations on their currently authorized spectrum or to assign their authorizations to others for CMRS use.

Innovative Technologies Demand Innovative Regulation

Moves towards regulatory flexibility, a hallmark of the FCC's spectrum proceedings, have accelerated following the FCC Spectrum Policy Task Force's recommendations in November 2002. Most recently, a separate advisory group, the FCC's Wireless Broadband Access Task Force, recommended a series of Commission

[9] See *Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order in the Matter of Improving Public Safety Communications in the 800 MHz, et al.,* July 8, 2004 in WT Docket No. 02-55.

actions to help speed deployment of wireless broadband services.[10] The group concluded:

> "To ensure that our nation's regulatory policies concerning wireless broadband do not impede innovation or delay service availability across America, the FCC should be vigilant and proactive in identifying and understanding emerging technologies and in ensuring that existing regulatory policies do not get in the way of these advances. Innovative technologies call for innovative regulatory policies."

The task force recommended the Commission continue to incorporate a forward-looking approach to regulation as wireless broadband networks begin to be used in combination with other broadband service networks and services. For example, the task force recommended that the FCC "regularly evaluate whether it is time to remove outdated rules." The report also recommended that the FCC consider providing incumbent licensees in restrictive bands with additional flexibility, either by granting significant new flexibility to existing licensees or "using creative market-based auction mechanisms."[11]

Creating 'Maximum Feasible Flexibility'

Recent examples of regulatory flexibility granted or under consideration for licensed and unlicensed operations beyond 900 MHz include:

Maximizing AWS Spectrum Use: The FCC adopted proposed service rules in September 2004 for Advanced Wireless Services (AWS) at 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz, allowing any use of this spectrum that is in line with the bands' fixed and mobile allocations. The FCC also released a Report and Order pairing 1915-1920 MHz with 1995-2000 MHz and 2020-2025 MHz with the 2175-2180 MHz band to allow service providers to "maximize the use of this spectrum."[12]

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[10] See *Connected on the Go, Broadband Goes Wireless*, Report by the Wireless Broadband Access Task Force, FCC, February 2005, in GN Docket 04-163.
[11] Id. at page 11.

[12] See *Notice of Proposed Rulemaking In the Matter of Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands, Service Rules*

As the Commission noted, "Ideally, the marketplace, not the government, should determine how this spectrum is used, within the wide limits of the fixed and mobile allocation." The point underscored by the FCC in this notice was that the licensing and operational rules should provide flexibility for licensees to offer 3G and other advanced services in the near-term, "while preserving their ability to quickly adapt to changes in technological capabilities and marketplace conditions in the future."

As is the case for the proposed 900 MHz rule changes outlined above, the Commission's AWS proposal contains a presumption for flexibility, with a tentative conclusion to provide for flexible use based on the Section 303(y) criteria. The proposal noted that the FCC has identified the creation of "maximum feasible flexibility in both allocations and service rules" as critical to ensuring that spectrum is put to its most beneficial use.

Streamlining Air-to-Ground Rules: The FCC proposed auction rules and streamlined other rules for air-to-ground radiotelephone service at 800 MHz. To protect public safety operators in adjacent bands from potential interference, the Commission applied to these air-ground licensees the same interference rules and protections adopted in the 800 MHz public safety proceeding. Again, the approach adopted by the Commission embraced flexibility to facilitate the provision of new services to consumers by eliminating unnecessary regulatory restrictions while protecting incumbents from interference. This proposed framework reflects the kinds of changes that Progeny has sought in the 900 MHz band for M-LMS licensees.

The order cited the FCC Strategic Plan for Fiscal Year 2003-2008 in delineating its goal to foster innovation and offer customers meaningful choice in services. The FCC is replacing the existing narrowband spectrum sharing approach, "which limits services to voice and very slow data," with a very flexible licensing approach. The changes will position providers of broadband air-to-ground service to compete against satellite-delivered broadband air-to-ground offerings. In a parallel to the M-LMS regulatory regime, without a similar level of flexibility for licensees at 902-928 MHz, location services that could be offered in this spectrum have been overtaken by competing offerings such as GPS.

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for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands in WT Docket No. 04-356, September 24, 2004, at page 3.

Updating MDS/ITFS Band: To provide greater flexibility and a "more functional band plan" for Multipoint Distribution Service (MDS) and Instructional TV Fixed Service (ITFS) licensees, the Commission adopted a Report and Order and Further Notice in July 2004 that updated the rules for these services.[13] The point of transforming the rules and policies governing these operations at 2500-2690 MHz was to allow licensees to migrate to more technologically and economically efficient uses, with a goal of broader availability of wireless broadband access. The FCC said the additional flexibility serves the public interest and permits licensees to provide new and innovative services, in line with the requirements of Section 303(y). Overall, the FCC said these actions responded to industry proposals for major rewrites of the then-existing regulations "so that these services will no longer be hindered by outdated and overly restrictive regulation."

Promoting Sharing Through Technology

In numerous other proceedings, the FCC also has granted or proposed regulatory flexibility to wireless services in a manner that balances interference concerns, public interest benefits and the potential for facilitating new technology deployments. In many instances, this regulatory flexibility is enabled by newer, more flexible spectrum management techniques that rely on technological solutions – rather than service restrictions – to address potential interference issues.

One recent example of minimizing regulatory requirements to maximize spectrum sharing is the FCC's adoption of rule changes on March 10, 2005, to provide access to new spectrum for wireless broadband at 3650-3700 MHz. The rule changes support multiple users sharing the spectrum by using "contention-based" protocols to minimize interference among fixed and mobile operations. Under the order, new fixed and mobile stations must use these protocols to reduce potential interference from cofrequency operation by "managing each other's access to spectrum."[14] The approach is essentially a hybrid model that relies on both the FCC's licensed and unlicensed regulatory regimes.

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[13] See *Report and Order and Further Notice of Proposed Rulemaking in the Matter of Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, et al. in WT Docket Nos. 03-66, 03-67, 02-68, 00-258, June 10, 2004.

[14] See FCC press release, "FCC Opens Access to New Spectrum for Wireless Broadband in the 3650 MHz Band," March 10, 2005.

The changes allow for nationwide, non-exclusive licensing of terrestrial operations in the band using technology that employs these contention-based protocols. The FCC decided against instituting eligibility restrictions and did not impose in-band or out-of-band spectrum aggregation limits. The rules give all licensees the "mutual obligation" to cooperate and avoid harmful interference with one another. Licensees must register all base stations with the FCC so that licensees can locate each other's operations and protect grandfathered stations, which include fixed satellite service licensees and federal radar stations, from interference. FCC Chairman Powell described the changes as providing "sufficient operating power and flexibility to help speed the introduction of new services to the marketplace."

Other flexibility changes for spectrum bands beyond 900 MHz include:

- The FCC proposed in December 2004 a relaxation on the current ban on the use of cellular phones on airborne aircraft. The proposal sought to minimize the potential for harmful interference to terrestrial systems while providing "maximum flexibility" to wireless carriers seeking to meet consumer demand.

- The Commission has adopted spectrum flexibility changes to promote the deployment of wireless services in rural areas. A September 2004 Report and Order made numerous changes in this area, including amending the FCC's rules to increase permissible power levels for base stations in certain wireless services that are located in rural areas or that provide coverage to unserved areas.

- In November 2003, the FCC made an additional 255 MHz available at 5.470-5.725 GHz for unlicensed devices, including wireless local area networks. To balance this flexibility and protect against interference, the rules required U-NII devices to use dynamic frequency selection to detect the presence of signals from other systems.

- The Commission adopted a Report and Order on March 10, 2005, concerning the use of cognitive – or "smart" – radio technologies to facilitate more intensive and efficient spectrum use, including smarter devices that more effectively use unlicensed spectrum. The Order clarified some authorization

requirements for software-defined and cognitive radios, requiring that radios incorporate certain security measures in software designed to be modified by a party other than the manufacturer to prevent unauthorized modifications.[15]

Parity Sought for LMS

Progeny continues to urge the Commission to initiate a rulemaking proceeding to open this band to flexible use and updated interference mitigation techniques. Section 303(y) of the FCC's rules allows flexible spectrum use if it is consistent with international agreements; and the FCC finds, after notice and an opportunity for comment, that it would be: (1) In the public interest; (2) Not deter investment in services or technology development; and (3) Not cause harmful interference. Using an outdated and overbroad set of regulatory approaches, the current M-LMS rules focus on the last prong of these criteria – protecting against interference – to the exclusion of these other factors, namely public interest benefits and services/technology investment.

The numerous grants of flexibility, or proceedings considering such relief, discussed above, underscore the need for parity of treatment for LMS licensees. Progeny lauds the FCC's intent to promote more efficient sharing of spectrum and deployment of advanced technologies. Both fairness and the public interest dictate that the Commission's stated goals of increasing spectrum flexibility and fostering technological innovation through such changes apply with equal force to LMS.

In accordance with Section 1.1206(b) of the Commission's Rules, please accept this original and one copy for submission.

Respectfully yours,

/s/ Janice Obuchowski
Janice Obuchowski
Of Counsel

[15] See FCC press release, "FCC Adopts Rule Changes for Smart Radios," March 10, 2005.

Progeny LMS, LLC